## PART I. SYSTEMS WITH FRICTION COUPLINGS

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8-14-61

KALININ, Nikolay Georgiyevich; LEBEDEV, Yuriy Alekseyevich; LEBEDEVA, Volga Ivanovna; PANOVKO, Yakov Gilelevich, prof. doktor tekhn. nauk; STRAKHOV, German Ivanovich; VENGRANOVICH, A., red.; PILADZE, Ye., tekhn. red.

[Structural damping in rigid joints] Konstruktsionnoe dempfirovanie v nepodvizhnykh soedineniiakh. Riga, Izd-vo Akad. nauk Latviiskoi SSR, 1960. 169 p. (MIRA 14:11)

1. Chlen-korrespondent AN Latviyskoy SSR (for Panovko).
(Damping (Mechanics))

KALININ, N.I.

Mechanizing accounting in railroad transportation. [Izd.]
LONITOMASH 44:148-151 '58. (MIRA 11:9)
(Railroads--Accounts, bookkeeping, etc.)

KALININ, N.I.

Jaw-type clamp for replacing PKN-6 inserts. Avtom., telem. i sviaz' 8 no.6:42 Je '64. (MIRA 17:6)

1. Starshiy elektromekhanik Voronezhskoy distantsii signalizatsii i svyazi Yugo-Vostochnoy dorogi.

FROLOV, G.D.; TROITSKIY, I.D.; LAMAN, N.K., nauchnyy sotrudnik; SADAKOV, A.I.;
KALININ, N.I.

One hundred and seventy-fifth anniversary of the "Elektroprovod" electric cable plant in Moscow. Vest. elektroprom. 31 no.12:18-23 D '60.
(MIRA 14:2)

1. Direktor Moskovskogo kabel'nogo zavoda "Elektroprovod" (for Frolov). 2. Glavnyy inzh. Moskovskogo kabel'nogo zavoda "Elektroprovod" (for Troitskiy). 3. Institut istorii yestestvoznaniya i tekhniki AN SSSR (for Laman). 4. Sekretar' partiynoy organizatsii Moskovskogo kabel'nogo zavoda "Elektroprovod" (for Sadakov). 5. Predsedatel' zavkoma Moskovskogo kabel'nogo zavoda "Elektroprovod" (for Kalinin).
(Moscow--Electric cables)

ALEKSEYEV, A.P., kand. biol. nauk; LUKASHEV, A.I., kand. sel'-khoz. nauk; BELEVTSEV, D.N., kand. sel'khoz. nauk; KALININ, N.I., st. nauchn. sotr.; ZHDANOV, L.A., akademik, red.; ALEKSEYEVA, R.L., red.

[Sunflowers in the Don Valley] Podsolnechnik na Donu. [By] A.P.Alekseev i dr. Rostov na Donu, Rostovskoe knizhnoe izd-vo, 1964. 110 p. (MIRA 17:6)

KALININ, N.I.

Regulations should be kept up to date. Avtom., telem. i sviaz' 7 no.6:36-37 Je '63.
(MIRA 17:3)

1. Starshiy elektromekhanik Voronezhskoy distantsii signalizatsii i svyazi Yugo-Vostochnoy dorogi.

CHEBOTAREV, Nikolay Petrovich. Prinimali uchastiye: BLIZNYAK, Ye.V., doktor tekhn. nauk, prof., retsenzent [deceased]; APOLLOV, B.A., doktor tekhn. nauk, prof., retsenzent; BEFANI, A.N., doktor tekhn.nauk, prof., retsenzent; BYKOV, V.D., kand. tekhn. nauk, retsenzent; KALININ, G.N., red.; BELYAKOVA, Ye.V., red.; GEORGIYEVA, G.I., tekhn. red.

[Study of runoff] Uchenie o stoke. Moskva, Izd-vo Mosk. univ., 1962. 405 p. (MIRA 15:8)

(Runoff)

KALININ, G.O.

3(4,5)

PHASE I BOOK EXPLOITATION SOV/1655

Akademiya nauk SSSR. Komitet po geodezii i geofizike.

Tezisy dokladov na XI General'noy assambleye Mezhdunarodnogo geodezicheskogo i geofizicheskogo soyuza. Mezhdunarodnaya assotsiatsiya nauchnoy gidrologii (Abstracts of Reports Submitted to the 11th General Assembly of the International Union of Geodesy and Geophysics. The International Association of Scientific Hydrology) Moscow, 1957. 101 p. /Parallel texts in Russian and English or French/ 1,500 copies printed.

No additional contributors mentioned

PURPOSE: This booklet is intended for hydrologists and civil engineers.

COVERAGE: This collection of abstracts covers reports presented at the 11th General Assembly of the International Union of Geodesy and Geophysics on hydrological, erosional, and glaciological processes. Studies related to problems of underground waters, snow, and rivers are also discussed. the abstracts are in Russian, with English or French translations. Those appearing in English are designated by a single asterisk; those in French by two. There are no references given.

Card 1/4

Abstracts of Reports (Cont.) SOV/1655

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Kalinin, G.O. Computing and Forecasting Runoff by the Inflow of Water Into a River Basin * 12

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Shul'ts, V.L. Basic Characteristics of the Regimen of Rivers of Central Asia in Connection With Problems of Their Utilization * 40

Bogomolov, G.V., and N.A. Plotnikov. Classification of Underground Waters and Their Representation on Maps ** 45

Makarenko, F.A. Characteristics of the Formation of Underground Runoff Into Open Reservoirs and Rivers and Methods of Determining Them * 48

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Kudelin, V.I. Principles of Regional Evaluation of Natural Reserves of Underground Waters and the Problems of Water Balance * 60

Ovchinnikov, A.M. Hydrogeological Maps of Folded Mountain Regions and Their Significance in the Evaluation of Underground Water Reserves * 64

Card 3/4

KALININ, G.P. [redacted]

Working the steep slope of the rich sulyukta bed. Izv. AN Kir.SSR no.4:203-220 '57. (MIRA 10:7)
(Sulyutka--Coal mines and mining)

KALININ, G.P.

Coal industry in Kirghizistan and the seven-year plan.
Ugol' 37 no.1:12-13 Ja '62. (MIRA 15:2)

1. Gosudarstvennyy nauchno-tekhnicheskiy komitet Kirgizskoy SSR.

(Kirghizistan—Coal mines and mining)

YELYUTIN, O.P. (Moskva); KALININ, G.P. (Moskva); ROGOV, G.I. (Moskva);
KHROMOV, S.M. (Moskva)

Physical and mechanical properties of alloys in the system titanium - molybdenum - aluminum. Izv. AN SSSR. Otd. tekh. nauk. Met. i gor. delo no.1:176-180 Ja-F '63. (MIRA 16:3)
(Titanium-molybdenum-aluminum alloys—Testing)(Phase rule and equilibrium)

L 11094-63 EWP(q)/EWT(m)/BDS—AFFTC/ASD—JD
ACCESSION NR: AP3000915

S/0279/63/000/002/0136/0140

56
55

AUTHOR: Yelyutin, O. P. (Moscow); Kalinin, G. P. (Moscow), Khromov, S. M. (Moscow)

27

TITLE: Physical properties of titanium-rich alloys of the titanium-aluminum-tin system

M

SOURCE: AN SSSR. Izv. Otd. tekh. nauk. Metallurgiya i gornoye delo, no. 2, 1963, 136-140

TOPIC TAGS: titanium-aluminum-tin system, titanium-rich alloy, titanium-rich-alloy structure, titanium-rich-alloy resistivity, resistivity temperature coefficient, thermal electromotive force, heat conductivity, titanium-rich-alloy strength

ABSTRACT: The physical and mechanical properties of Ti alloys with up to 10% Al and up to 25% Sn have been studied. The alloys were melted in a nonconsumable-electrode arc furnace in an argon atmosphere, forged into rods at a temperature ranging from 1100—1200 to 700—800C, annealed in a vacuum of 1 x $10^{-5}$ mm Hg at 1200C for 3 hr, and cooled to room temperature at a rate of 80C/sec. After

Card 1/3

L 11094-63
ACCESSION NR: AP3000915

D

this treatment, all alloys had a single-phase structure of α-solid solutions. Electrical resistivity at 20C was found to increase steadily with increasing Sn or Al content and reached 1.85 to 1.90 ohm x mm$^2$/m in alloys with 7.5 to 10% Al and 2.5 to 15% Sn. The temperature coefficient of resistivity, while remaining constant for a given alloy in the 20 to 180C range, decreases linearly with increasing Sn or Al content and is 20 x 10$^{-5}$/deg for alloys with 7.5 to 10% Al and 5.0 to 15% Sn. The thermal emf (in couple with Cu), which for pure Ti is +5 mv/deg C, decreases by alloying with Al or Sn, and at 2.5% Sn or 1% Al is negative. A maximum thermal emf of -10μ v/deg C was shown by ternary alloys with up to 10 to 20% Sn and 5 to 7.5% Al. Both alloying elements decrease heat conductivity from 0.030-0.013 cal/cm x sec x deg for pure Ti to 0.012 cal/cm x sec x deg for alloys containing 22.5% Sn and 2.5% Al. The tensile strength remains almost unaffected on the 78 to 85 kg/mm$^2$ level with additions of up to 10 to 12% Sn, but increases to 120 kg/mm$^2$ at 17% Sn with elongation dropping to 10%. Al is more effective than Sn in strengthening alloys. Ternary Ti-Sn-Al alloys with 6 to 12% and 4 to 7.5% Al have a maximum

Card 2/3

L 11094-63
ACCESSION NR: AP3000915

tensile strength of 125 kg/mm$^2$ and a ductility of 0 to 6%. Further increase in the Sn and Al content lowers both strength and ductility. Orig. art. has: 4 figures.

ASSOCIATION: Institut pretsizionny*kh splavov TsNIIChM (Institute of Precision Alloys TsNIIChM)

SUBMITTED: 21Aug62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: ML NO REF SOV: 006 OTHER: 001

Card 3/3

YELYUTIN, O.P. (Moskva); KALININ, G.P. (Moskva); ROGOV, G.I. (Moskva);
KHROMOV, S.M. ~~(Moskva)~~

Physical properties of alloys of the titanium corner in the system titanium - aluminum - tin. Izv. AN SSSR. Otd. tekh. nauk. Met. i gor. delo no.2:136-140 Mr-Ap '63. (MIRA 16:10)

Kalinin, G.P.

3.6-143 551.577.32(47)

Kalinin, G. P., Rol' lesa v raspredelenii osadkov. [The role of forests in the distribution of precipitation.] *Meteorologiia i Gidrologiia*, No. 1:14-20, Sept. 1950. 3 figs. DLC—For this study, long period observations at 100 meteorological stations in the Moscow region were used. In some forest regions the excess of annual precipitation is 15%, the excess during the warm season about 20%, and during the cold period about 8-10%. The average for the Moscow area in the forest regions is an excess of about 10%, depending on the area of the forest with the large areas showing greater excess in the amount of precipitation. Relationships are shown by scatter diagrams which reveal the variations in seasonal precipitation in forested and unforested areas with size of area, etc. *Subject Headings:* 1. Precipitation distribution 2. Forest influences 3. Moscow Region, U.S.S.R.—*N.T.Z.*

KALININ, G. P.

"Basic Methods of Short-Term Forecasts of the Hydrological Regime of Rivers." Sub 25 Dec 51, Central Inst of Weather Forecasting.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

APOLLOV, B.A.; KALININ, G.P., otvetstvennyy redaktor; GRIGOR'YEV, V.S.,
redaktor; ORLOVA, N.S., tekhnicheskiy redaktor.

[Study of rivers] Uchenie o rekakh. [Moskva] Izd-vo Moskovskogo
universiteta, 1951. 521 p. [Microfilm] (MIRA 8:1)
(Rivers)

KALININ, G. P.

KALININ, G. P.

Science

Principles of the methodology of short-term forecasts of the water cycle, Leningrad, Gidrometeoizdat, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

KALININ, G.P.; SOMOV, N.V.,red.; RULEVA, M.S.,tekhn.red.

[Principles underlying methods used in short-range hydrological forecasting] Osnovy metodiki kratkosrochnykh prognozov vodnogo rezhima. Leningrad. Gidrometeor. izd-vo, 1952. 165 p. (Moscow. TSentral'nyi institut prognozov. Trudy, no 28) (MIRA 12:1)
(Rivers)

KALANIN, G. P.

PA 237T100

USSR/Meteorology - Run-off Dec 52

"Analysis of Dependence of Run-off on Precipitation (Water Reserves in Snow)," Cand Geog Sci G. P. Kalanin, Moscow Central Inst of Forecasting

"Meteorol i Gidrol" No 12, pp 29-32

Presents eq of run-off versus precipitation, which facilitates analysis of the variation, according to territory, of relation between precipitation and run-off, depending on physio-geographical conditions. Derives similar formula for distribution of water absorption.

237T100

KALININ, G. P., and DARMAN, Z. I.

"Computation of the Frequency of Hydrological Phenomena on the Basis of an Analysis of Their Formation," Meteorol. i gidrologiya, No 1, 1953, pp 46-50

The author attempts to construct practically the curves of confidence for the maximum discharges of water on the basis of an analysis of the conditions governing their formation and to determine the combinations of unfavorable meteorological conditions for high spring floods, using two large river basins as an example. The main factors determining the maximum discharge (yield) of water of springtime floods ($Q_{max}$) are taken to be the reserves of water in the snow cover (h) and the quality of the rapid springtime thawing of the snow (druzhnost') characterized by the quantity 1/t, where t is the duration of the spring flood or of standing high water. (RZhGeol, No 5, 1954)

SO: Sum. No. 568, 6 Jul 55

KALININ, G. P., and ABAL'YAN, T.S.

Influence of Relief on the Quantity of Precipitation. Meteorol. i gidrologiya, No 6, 1953, pp 22-24

Nonuniformity of distribution of precipitation over a territory depends upon the roughness of the locality and altitudinal position of the region of observations in relation to the surrounding territory. In accordance with data of observations in Central Asia, Stalingrad and Smolensk regions, and south Ukraine, correlational dependences have been found between the quantity of fallen precipitation and a locality's roughness and altitude. In the first case the coefficients of correlation were from 0.56 to 0.82; in the second case the correlation turned out to be but slightly satisfactory. The authors consider that if the roughness's influence is excluded the distribution of precipitation would possess the same pluvial character as the distribution of the factors forming them (moisture content, thermobaric regime of air currents). (RZhGeol, No 5, 1954)

SO: Sum. No. 568, 6 Jul 55

BUDAGOVSKIY, A.I.; KALININ, G.P., doktor geograficheskikh nauk, redaktor;
ALEKSEYEVA, T.V., tekhnicheskiy redaktor.

[Soil absoprtion of water] Vpityvanie body v pochvu. Moskva, Izd-vo
Akademii nauk SSSR, 1955. 139 p. (MLRA 8:11)
(Soil absorption)

KALININ, G.P.

AID P - 1429

Subject : USSR/Meteorology and Hydrology

Card 1/2 Pub. 71-a - 3/23

Authors : Kalinin, G. P., Dr. of Geogr. Sciences, Prof. and
Zmiyeva, E. S., Kandidat of Tech. Sci.

Title : On the regulation of the flow of melted water from farm lands

Periodical : Met. i gidro., 1, 16-22, Ja - F 1955

Abstract : A formula is suggested which would correlate the total amount of the surface discharge of melted water with the depth of the thawed layer of the soil, the deficiency in the absorption by the soil, the area of the thawed surface over which the water flows, its unthawed and snow-covered area, and the total area. For practical computation of the depth of thawed soil, a formula is given in connection with air mean daily positive temperature (centigrade). These formulae show how to control the

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Met. i gidro., 1, 16-22, Ja - F 1955 AID P - 1429

Card 2/2 Pub. 71-a - 3/23

discharge by clearing the necessary part of soil surface from the snow cover. A table, 2 graphs and several formulae

Institution: Main Administration of Hydrometeorological Service at the Council of Ministers of the USSR

Submitted : No date

USSR/Physics of the Hydrosphere - General Problems, N-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36246

Author: Kalinin, G. P., Zmiyeva, Ye. S.

Institution: None

Title: On the Use of Aerial Photography for the Study of the Process of the Descent of the Snow Cover

Original Periodical: Tr. Ts[illegible]ntr. in-ta prognozov, 1956, No 44, 107-119

Abstract: Description of the aerial photographs, taken by the Central Institute of Forecasting in the spring of 1954. Possible errors in the determination of the mean arithmetic value of the different number of observations of the amount of snow in a given locality are discussed.

Card 1/1

USSR/Physics of the Hydrosphere - General Problems, N-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36244

Abstract: river beds. An assumption is made and justified that the duration of the infiltration in the elementary slopes of the network of creeks is equal to the duration of the precipitation. The ratio of the runoff losses during the time of rain to the runoff losses during the process of the flow from the creeks is written in the following form: $\frac{F_{bas} i_{in} T_r}{F_c i_c T_c} = \eta$, where $F_{bas}$ is the area of the basin, $i_{in}$ is the average intensity of infiltration into the basin, $T_r$ -- the duration of the rain, $T_c$ -- the duration of the flow in the creeks, $F_c$ -- the average area occupied by the creeks, $i_c$ -- the average intensity of infiltration in the creeks.

By way of examples of experimental data and theoretical considerations, which give an idea concerning the character of the intensity of the infiltration of the precipitation in the elementary slopes with time, a note is made of the investigations by Kashin (based on Kachinskiy's data), Alekseyev, and Bronovitskaya, the relationships and equations proposed by them are evaluated, and

Card 2/3

USSR/Physics of the Hydrosphere - General Problems, N-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36244

Abstract: the conditions under which they are valid are analyzed, and refinements are introduced.

The equation for the infiltration curve is assumed in the following form $i_{in} = i_o + \frac{A}{\sqrt{t}}$ and from it is derived an equation for the values of the parameters A for actual rain flood waters. It is recommended that the calculations represented by the equation for the infiltration be performed in the form of nomograms. An example is given of a detailed computation of the losses and of the flood-water runoff, of the graphical dependence between the fundamental parameters, and of a general procedure for the calculation, based on the use of a variable infiltration curve, indicating the physical and geographical features of the basin, as well as the variable hydrometeorological factors preceding and contributing to the formation of the runoff.

Card 3/3

KALININ, Genadiy Pavlovich; MAKAROVA, Tat'yana Timofeyevna; SOMOV, N.V., otvetstvennyy redaktor; SHATILINA, M.K., redaktor; FLAUM, M.Ya., tekhnicheskiy redaktor.

[Hydrometeorological factors determining the occurrence of high water in the flat land rivers of European Russia] Gidormeteorologicheskie usloviia formirovaniia vysokogo polovod'ia na ravninnykh rekakh Evropeiskoi territorii SSSR. Leningrad, Gidrometeor.izd-vo 1957. 177 p. (MIRA 10:6)

(Rivers)

KALININ, G. P.

"The Present Methods of Hydrological Prognosis and Ways Leading to Their Development" by G. P. Kalinin

report presented at the 3rd All-Union Hydrological Congress, 7-17 Oct 1957, Leningrad.

(Izv. Ak Nauk SSSR, ser geograf., 3, pp3-9, '58)

KALININ, G.P.; ABAL'YAN, T.S.

Determining the subterranean feeding of rivers. Meteor. i gidrol. no.5:12-20 My '57. (MLRA 10:8)
(Rivers) (Water, Underground)

KALININ, G.P.

KALININ, G.P.; MILYUKOV, P.I.

Calculating unsteady motion of water in open beds. Meteor.i gidrol. no.10:10-18 O '57. (MIRA 10:11)
(Hydrodynamics) (Differential equations)

KALININ, [illegible]

Development of methods for prognoses of water regimes by the Central Institute of Prognoses. Trudy TSIP no.55:35-14 '57.
(MLRA 10:9)

(Hydrology)

3(7) PHASE I BOOK EXPLOITATION SOV/1883

Kalinin, G.P. and P.I. Milyukov

Priblizhennyy raschet neystanovivshegosya dvizheniya vodnykh mass (Approximate Calculation of the Non-Stabilized Motion of Water Masses) Leningrad, Gimiz, 1958. 70 p. (Series: Leningrad. Tsentral'nyy institut prognozov. Trudy, vyp. 66) 1,000 copies printed.

Resp. Ed.: A.N. Vazhnov; Ed. (Title page): A.N. Vazhnov; Ed. (Inside book): L.P. Zhdanova; Tech. Ed.: O.G. Vladimirov

Additional Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

PURPOSE: This publication is intended for hydrologists and hydraulic engineers concerned with problems in hydrometry, hydrological forecasting, and quantitative estimates in the field of hydrology and water economy.

Card 1/3

KALININ, G.P.

3 (3,7)

PHASE I BOOK EXPLOITATION SOV/1914

Vsesoyuznyy gidrologicheskiy s"yezd. 3d, Leningrad, 1957.

Trudy ... t. I: Obshchiye svedeniya, resheniya i plenarnyye doklady. (Transactions of the 3d All-Union Hydrological Convention. Vol. 1: General Information, Resolutions, and Plenary Reports) Leningrad, Gidrometeoizdat, 1958. 242 p. Errata slip inserted. 2,000 copies printed.

Resp. Ed.: V.A. Uryvayev; Ed.: R.V. Grosman; Tech. Ed.: A.N. Sergeyev

PURPOSE: The book is intended for scientists engaged in the fields of hydrophysics, meteorology, hydrodynamics, hydrometry and general hydrology.

COVERAGE: This is the first of ten volumes to be issued by the Hydrometeorological Service on the Third All-Union Hydrological Convention which took place in Leningrad in October 1957. It reports on the preparation for and the actual proceedings at the convention, the decisions taken in plenary and departmental meetings, the minutes of the plenary meetings and plenary reports. It provides a complete list of the reports brought up for discussion, the names of the organizations which participated in the convention, and a complete list of the 1000 participants together with their affiliations. This volume was prepared for publication in the Gosudarstvennyy ordena Trudovogo Krasnogo Znameni gidrologicheskiy institut by Candidates of Geographical Sciences O.N. Borsuk, I.V. Popov, and O.A. Spengler under the editorship of Candidate of Technical Sciences V.A. Uryvayev. There are no references given.

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Kondrat'yev, N.Ye. Investigation and Computation of River-bed Deformations as Related to the Regulation of Rivers

Gerasimov, I.P. The Problem of the Heat and Water Conditions of the Earth's Surface and Its Significance in Physical Geography

[illegible]-Chen. Hydrologic Works in Modern China

List of Abbreviated Names of Organizations

List of the Reports Heard at the Convention

List of Organizations Represented at the Convention

List of the Convention Participants

List of the Foreign Guests at the Convention

AVAILABLE: Library of Congress

Card 1/[illegible]

AUTHORS: Kalinin, G. P., Milyukov, P. I. SOV/ 50-58-7-3/20

TITLE: On the Calculation of the Irregular Stream Flow in the River Beds by the Unit-Graph Method (O raschete neustanovivshegosya dvizheniya vody po ruslam pri pomoshchi krivykh dobeganiya)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 7, pp. 18-25 (USSR)

ABSTRACT: The calculation of the formation and the displacement of floods on the basis of the unit-graph method is used to a great extent in the practice of the USSR as well as of other countries (Refs 4 and 8). In the present paper the attempt is made to prove the unit-graphs on the strength of the theory of irregular water flow in the river beds. This is extremely difficult owing to the fact that the calculation methods of such a flow are complicated. The basic methods applied at present, the method of the characteristics (Ref 7) and the method of the momentary water supply which are used at present (Refs 1, 2, and 3) are complicated and it is not possible to derive from them a general equation of the unit-graph. The authors suggest a new simplified calculation method of the irregular water flow (Ref 5). The calculation is simplified thanks to the established theory that each river

Card 1/4

SOV/50-58-7-3/20

On the Calculation of the Irregular Stream Flow in the River Beds by the Unit-Graph Method

bed may be represented as consisting of a series of single sections. For each of these sections an obvious connection exists between the water volume in the section concerned and the flow quantity across its lower line of division $Q = f(W)$. Such sections are denoted as characteristic sections. The obvious dependence of the flow quantity on the water supply in the characteristic section makes possible the derivation of a simple analytical formula for the flow quantity across the lower line of division of the section. This depends on the supply of water in the pertinent section and on time. In the case of several complementary assumptions such a simple solution may be found simultaneously for several sections, i.e. an equation of the unit-graph can be set up. These assumptions are the following:

1) the dependence $Q = f(W)$ is linear - $Q = \frac{1}{\tau} W$, where $\tau$ is constant.

2) the parameter $\tau$ has the same value for all characteristic sections. The first assumption is obligatory. The second may

Card 2/4

be neglected, this renders, however, the equation of the unit-graph more complicated. The authors used the second assumption as well. (Fig 1) shows to which extent the unit-graph changes according to the number of the characteristic sections. On the strength of the unit-graphs calculated by means of the described method a number of examples of the transformation of the flood waves as well as of the tolerance of the [illegible] GES was calculated (Fig 2). Finally it must be taken into account that the water supplies in the river bed are exhausted. The flow quantity of the water at the cost of the exhaustion of the supplies in the section at the beginning is expressed by the flow quantity across the lower lines of division of the characteristic sections which are multiplied with the ordinates of the corresponding unit-graphs. The total flow quantity of the water across the line of division for which the calculation was carried out is equal to the sum of the flow quantity at the expense of the exhaustion of primary water supplies in the characteristic sections 1, 2, 3 ..... n as well as at the expense of

SOV/50-58-7-3/20

On the Calculation of the Irregular Stream Flow in the River Beds by the Unit-Graph Method

the increase of the water from the upper to the lower line of direction. There are 2 figures, 1 table, and 8 references, 7 of which are Soviet.

1. Inland waterways--Analysis 2. Fluid flow--Performance
3. Flood--Control 4. River currents--Analysis 5. Mathematics

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3(7)

SOV/50-58-10-15/20

AUTHORS: Belinskiy, N. A., Kalinin, G. P.

TITLE: A Forecasting Method for Hydrometeorological Elements (Ob odnom metode prognozov gidrometeorologicheskikh elementov)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 10, pp 54-58 (USSR)

ABSTRACT: According to the method suggested by L. A. Vitel's the forecasts of rainfalls, air temperature, ice formation and water passage of rivers are developed more and more. This method concerns a clarification as to how the anomaly of baric systems of the atmosphere is related to the anomalies of hydrometeorological forecasts for the corresponding time. A synoptic catalog compiled by Vitel's containing a certain numerical characteristic of baric formations is much in use. The idea of such solution is progressive but the calculation scheme used in the practical solution seems to be insufficiently founded by statistics to the authors. There are several ways for detecting prognostic characteristics but the tabular method is the principal one. In the present paper only this latter method is discussed as it can be estimated quantitatively and contains no arbitrary assumptions. The character of the method by

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Vitel's is explained. By using the recommended selection technique of values and thus operating with purely accidental series not at all connected with the baric systems, one can certainly obtain a certain number of "prognostic characteristics" which, however, are evidently useless for a forecast. The total number of these characteristics can be calculated for an accidental series by the composition method. The authors point out that there is no regularity of forecasts in time and by regions, except for cases of synchronous comparison of baric systems with rainfalls. A similar picture turns up in the dependencies obtained for the forecasts of flow-off. It results from the facts described here that there was no reason for expecting a conformity between the rainfalls forecast in this way and their actual values (Fig 1). Of course, some experts of local administration of the hydrometeorological service formed justified doubts on the regularity of the method by Vitel's. An investigation showed that the choice under the scheme by Vitel's is artificial. The scheme was discussed as, due to its agreeable simplicity (in spite of the warning by L. A. Vitel's himself), it had entered practice far but not critically. Unfortunately, also other similar methods are used

A Forecasting Method for Hydrometeorological Elements SOV/50-58-10-15/20

in forecasting practice. There are 1 figure and 3 tables

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KALININ, G.P., prof.

Some characteristics of high-water formation. Trudy OGMI no.15:
145-156 '58. (MIRA 12:7)

1.TSentral'nyy institut prognozov.
(Floods)

KALININ, G.P., prof.

Some problems concerning the principles of methods used in maximum runoff estimations; speech following the reports of D.L. Sokolovskii and G.A. Alekseev. Trudy OGMI no.15:207-208 '58.
(MIRA 12:7)

1.TSentral'nyy institut prognozov.
(Runoff)

KALININ, G.P., prof.

Some problems and new trends in the study of runoff. Trudy OGMI no.15:231-232 '58. (MIRA 12:7)

1.TSentral'nyy institut prognozov.
(Runoff)

KALININ, G.P.; MAKAROVA, T.T.

Methods for determining the losses of melted-snow-water runoff.
Trudy TSIP no.65:3-22 '58. (MIRA 11:6)
(Runoff)

KALININ, G.P.; MAKAROVA, T.T.

Use of the water balance equation in calculating and forecasting the runoff and factors influencing it. Trudy TSIP no.75:29-46 '58.
(MIRA 11:11)

(Runoff)

GUREVICH, M.I., kand.geogr.nauk; POPOV, I.V., kand.geogr.nauk; SPENGLER, O.A., kand.geogr.nauk; URYVAYEV, V.A., otv.red.; SOKOLOVSKIY, D.L., prof., doktor tekhn.nauk, red.toma; CHEBOTAREV, A.I., dotsent, kand.tekhn.nauk, red.toma; KALININ, G.P., prof., doktor geogr.nauk, red.toma; GROSMAN, R.V., red.; SHATILINA, M.K., red.; BRAYNINA, M.I., tekhn.red.

[Transactions of the Third All-Union Hydrological Congress] Trudy III Vsesoiuznogo gidrologicheskogo s"ezda. Leningrad, Gidrometeor. izd-vo. Vol.2. [Section of runoff calculations and forecasts] Sektsiia raschetov i prognozov stoka. 1959. 767 p. (MIRA 13:2)

1. Vsesoyuznyy gidrologicheskiy s"yezd. 3d, Leningrad, 1959.
(Hydrology--Congresses) (Runoff)

KALININ, G. P.

3(3) P2 PHASE I BOOK EXPLOITATION SOV/2593

Moscow. Tsentral'nyy institut prognozov

Voprosy gidrologicheskikh prognozov (Problems in Hydrological Forecasting) Moscow, Gidrometeoizdat, 1959. 122 p. (Series: Its Trudy, vyp. 84) Errata slip inserted. 900 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Eds. (Title page): V. V. Piotrovich and V. I. Sapozhnikov; Ed. (Inside book): M. I. Sorokina; Tech. Ed.: I. M. Zarkh.

PURPOSE: This issue of the Institute's Transactions is intended for hydrologists and meteorologists.

COVERAGE: Individual articles discuss the problem of evaluating the methods and the verification rate of hydrological forecasts, the forecasting of high-water discharge and ice phenomena on rivers and water reservoirs, and the use of intake curves in forecasting. No personalities are mentioned. References accompany each article.

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Problems in Hydrological (Cont.) SOV/2593

| | |
|---|---|
| Piotrovich, V. V. Methods of Long-Range Forecasting of Ice Clearance on the Stalingradskaya, Volzhskaya and Tsimlyanskaya GES Reservoirs | 99 |
| Savchenkova, Ye. I. Increased Accuracy in Long-Range Forecasting Methods of Ice Appearance on Rivers in Siberia and the Far East | 115 |

AVAILABLE: Library of Congress

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MM/fal
12/7/59

KALININ, G.P.

PHASE I BOOK EXPLOITATION SOV/3511

Moscow. Tsentral'nyy institut prognozov

Voprosy gidrologii (Problems in Hydrology) Moscow, Gidrometeoizdat (Otd-niye) 1959. 98 p. (Series: Its: Trudy, vyp. 94) 800 copies printed.

Sponsoring Agencies: Tsentral'nyy institut prognozov; Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Ed. (Title page): N.Ya. Podviashenskaya; Ed. (Inside book): V.S. Korailenko; Tech. Ed.: T.Ye. Zemtsova.

PURPOSE: This publication is intended for hydrological forecasters in field offices of the Hydrometeorological Service. It will also be of interest to scientific research workers.

COVERAGE: This issue of the Transactions of the Central Institute of Weather Forecasting contains articles dealing with problems in hydrological forecasting. Individual articles discuss forecasting of snowmelt runoff, forecasting on the basis of groundwater, flood runoff and maximum discharge forecasting, etc. Evaluation of forecasting methods is given and their accuracy is analyzed. No personalities are

Kalinin, G.P., and T.T. Makarova. Investigation of Some Problems of Spring Flood Runoff 37

Rakhmanov, V.V. Dependence of the Amount of Precipitation on the Forest Cover in Plains Areas of European USSR 48

Nezhikhovskiy, R.A. On the Probability Form of Hydrological Forecasting 67

Mashukov, P.M. Evaluation of Hydrological Forecasting 71

Nechayeva, N.S. The Most Commonly Used Methods in the USA for Calculating the Transformation of Flood Waves During Their Passage Through a Stream Channel 79

Dygalo, V.S. The Problem of Accuracy in Precipitation Measurements (According to Observation Data at the B.Sareyevo Runoff Station) 92

AVAILABLE: Library of Congress

1

BELINSKIY, N.A., KALININ, G.P.

Preliminary information on prospective water level changes in the Caspian Sea during 1956-1970. Trudy Okean. kom. 5:92-95 '59. (MIRA 13:6)

(Caspian Sea--Hydrography)

3 (7)

AUTHORS: Kalinin, G. P., Milyukov, P. I. SOV/50-59-9-2/16

TITLE: Forecast and Calculation of Water Levels Below Hydroelectric Power Stations on the Basis of Water Gauge Observations

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 9, pp 13 - 19 (USSR)

ABSTRACT: The present article points out the possibility of forecasting and calculating the water levels and the water quantity when reliable curves for the water quantities and the morphometric characteristics of the river bed are missing, but data are available, at least on short-termed observations of the water levels in those places where a forecast is required. The basis of the method suggested by the authors in the papers (Refs 1, 2) is the conception of the characteristic section, i.e. the river section where a distinct relation is maintained between the water volume W and the water quantity Q in the lower range of the section, as well as between the water quantity mentioned and the level in the middle of the characteristic section. The length of the characteristic section is determined by formula (1). The calculation consists in the solution of the system of formulas (2) for every characteristic section. Here, the time

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Forecast and Calculation of Water Levels Below Hydroelectric Power Stations on the Basis of Water Gauge Observations

SOV/50-59-9-2/16

$\tau = \frac{dW}{dQ}$ is used, which is obtained on the basis of the volume curve (Ref 2) for every characteristic section. Of the 3 possible kinds of solution of the formulas (2), the analytical method is indicated here. It is based on the calculation with respect to short time intervals ($\Delta t$) within which a constancy of $\tau$ and a linear law for the change of the water quantity q arriving at the section can be assumed. If $\Delta t < \tau$, the solution of (2) leads to the simple formula (3): $\Delta Q = (q_{mean} - Q_0)K_1$. The coefficient $K_1$ only depends on the ratio between $\Delta t$ and $\tau$, and can be determined in 4 different ways which are pointed out here. The first kind is described in detail in the papers (Refs 1,2), the third in the paper (Ref 3). The 4th kind is explained here by the example of a calculation of the wave motion and stretching of it at the Gor'kovskaya GES (Gor'kiy Hydroelectric Power Station) on the Volga. This is an empirical method by means of choice. The order in the calculation is pointed out. The observation data of 1956-1958 are used.

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Forecast and Calculation of Water Levels Below Hydroelectric Power Stations on the Basis of Water Gauge Observations SOV/50-59-9-2/16

To check the water quantities calculated, the levels were determined at all water level measuring points. Table 1 shows that the levels calculated are in good agreement with the actual levels. If the coefficients for the analytical method are determined by the method shown here, the water level can be determined at the same water level measuring points for any given or assumed working curve of the hydroelectric power station.- Finally, the calculations of water levels carried out on request of the management of the Gor'kiy Hydroelectric Power Station at all water level measuring points used in 1956-1958 are pointed out for some variants of the daily working curve of the power station. There are 3 figures, 1 table, and 2 Soviet references.

Card 3/3

APOLLOV, Boris Alekeandrovich; KALININ, Gennadiy Pavlovich; KOMAROV, Valentin Dmitriyevich; SHATILINA, M.K., red.; VLADIMIROV, O.G., tekhn.red.; BRAYNINA, M.I., tekhn.red.

[Hydrological forecasts] Gidrologicheskie prognozy. Leningrad, Gidrometeor.izd-vo, 1960. 406 p. (MIRA 13:11)
(Hydrology)

FEDOROV, N.N., kand.tekhn.nauk; POPOV, I.V., kand.geogr.nauk; BORSUK, O.N., kand.geogr.nauk; GRUSHEVSKIY, M.S., kand.tekhn.nauk; VELIKANOV, M.A., prof., doktor tekhn.nauk, red.(Moskva); URYVAYEV, V.A., otv. red.; ALEKIN, O.A., red.; BLIZNYAK, Ye.V., red. [deceased]; BORSUK, O.N., red.; DAVYDOV, L.K., red.; DOMANITSKIY, A.P., red.; KALININ, G.P., red.; KRITSKIY, S.N., red.; KUDELIN, B.I., red.; MANOIM, L.F., red.; MENKEL', M.F., red.; ORLOV, B.P., red.; PROSKURYAKOV, A.K., red.; SOKOLOVSKIY, D.L., red.; SPENGLER, O.A., red.; CHEBOTAREV, A.I., red.; CHERKOVSKIY, S.K., red.; SHATILINA, M.K., red.; VLADIMIROV, O.G., tekhn.red.

[Transactions of the Third All-Union Hydrological Congress] Trudy III Vsesoiuznogo gidrologicheskogo s"ezda. Vol.5. [Section of Hydrodynamics and River-Bed Evolution] Sektsiia gidrodinamiki i ruslovykh protsessov. 1960. 421 p.

(MIRA 13:11)

1. Vsesoyuznyy gidrologicheskiy s"ezd. 3d, Leningrad, 1957.
2. Gosudarstvennyy gidrologicheskiy institut (for Fedorov, Popov).
3. Chlen-korrespondent AN SSSR (for Velikanov).

(Hydrology--Congresses)

KALININ, G P

PHASE I BOOK EXPLOITATION SOV/5475

USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby

Teplovoy i vodnyy rezhim zemnoy poverkhnosti (Thermal and Water Regime of the Earth's Surface) Leningrad, Gidrometeoizdat, 1960. 191 p. Errata slip inserted. 600 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Eds.(Title page): I. P. Gerasimov, Academician, M. I. Budyko, Doctor of Physics and Mathematics, and A. P. Gal'tsov, Doctor of Geographical Sciences; Ed.: M. M. Yasnogorodskaya; Tech. Ed.: M. I. Braynina.

PURPOSE: This publication is intended for geophysicists, geographers, climatologists, agronomists, and agriculturists.

COVERAGE: The seventeen articles contained in this publication represent condensed versions of reports presented at the Conference on the Heat and Water Regime of the Earth's Surface, convened by the Glavnaya geofizicheskaya observatoriya im. A. I. Voyeykova (Main Geophysical Observatory imeni A. I. Voyeykov) in April 1959. Individual articles deal with the investigation of the thermal balance of the earth's surface, problems of the genesis of climate related to heat and moisture exchange, the indicators of heat and water balance in agriculture, and problems related to the effect of hydrometeorological factors upon complex geographical processes and phenomena. No personalities are mentioned. References follow individual articles.

Dzerdzeyevskiy, B. L., and Yu. L. Rauner [Institut geografii AN SSSR -- Institute of Geography, AS USSR]. The State and the Tasks of Investigating the Heat Balance of a Forest 29

Card 2/5

Kalinin, G.P. [Tsentral'nyy institut prognozov -- Central Institute of Weather Forecasting]. General Reasons for the Investigation of Water Balance 42

Popov, O.V., and V.I. Kuznetsov [Gosudarstvennyy gidrologicheskiy institut -- State Hydrological Institute]. Experimental Investigation of the Elements of the Water Balance on Dry Land 48

L'vovich, M.I. [Institute of Geography, AS USSR]. Methods of Runoff Investigation on the Basis of Water Balance 62

Budagovskiy, A.I. [Institute of Geography, AS USSR]. Investigation of the Water Balance of Soil 71

Gal'tsov, A.P. [Institute of Geography, AS USSR]. The State and the Tasks of the Studies of the Genesis of Climate 82

Shvets, M.Ye. [Main Geophysical Observatory imeni A.I. Voyeykov]. Basic Problems of the Theory of Climate 96

Drozdov, O.A. [Main Geophysical Observatory imeni A.I. Voyeykov]. Moisture Exchange in the Atmosphere 107

Card 3/5

Timofeyev, M.P. [Main Geophysical Observatory imeni A.I. Voyeykov]. Heat Balance and the Microclimate 120

Grigor'yev, A.A. [Academician, Institute of Geography, AS USSR]. The Role of Heat and Moisture Exchange in the Structure and Development of the Geographic Mantle (Mainly in the Lowlands of the Temperate Zone) and Their Significance in the Productivity of Agricultural Crops 128

Gerasimov, I.P. [and G.S. Pogodina, Institute of Geography, AS USSR]. Hydrothermal Factors in Soil Formation 144

Volobuyev, V.R. [Akademiya nauk Azerbaydzhanskoy SSR -- AS Azerbaydzhanskaya SSR]. Total Expenditure of Energy for Soil Formation in Relation to the Hydrothermal Conditions 152

Lavrenko, Ye. M. [Botanicheskiy institut AN SSSR--Botanical Institute, AS USSR]. Hydrothermic Factors and the Geography and Ecology of the Vegetation Cover 180

Davitaya, F.F. [Central Institute of Weather Forecasting]. Water and Heat Regime of the USSR and Some Problems of Agriculture 186

S/050/60/000/008/002/002
B012/B056

AUTHORS: Kalinin, G. P., Milyukov, P. I., Nechayeva, N. S.

TITLE: Simple Electronic Simulating Device for the Forecast of Floods

PERIODICAL: Meteorologiya i gidrologiya, 1960, No. 8, pp. 20 - 28

TEXT: Programs for the solution of problems in the field of flood-forecasts were made at the GGI and Gidroproyekt. A short survey is given of the analog computers, and it was found that for calculating flood forecasts, at water power plants, special simulators are the most useful, which have to solve one and the same problem several times. The problems to be solved in developing such electrical special simulators are pointed out. In 1958 such a device was developed at the Tsentral'nyy institut prognozov (Central Institute of Weather Forecasts). Upon this device, the calculation of non-steady water motion according to the method developed by G. P. Kalinin and P. I. Milyukov (Ref. 2) was based. In this method, the river or river-bed respectively is subdivided into a number of sections of certain length. In each section there is a unique

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interrelation between the water volume W in the section and the quantity of drained-off Q water in its lower part. Such sections are described as characteristic. Calculation consists in solving the differential equations (1) and (3) for each of these sections. This manner of determination makes it possible to produce an electric simulator for one or else for several consecutive characteristic sections. Equations (1) and (3) are solved, and formula (4) is obtained. Also the circuit consisting of a resistance and capacity has such a formula (9), which contains the product $RC=T$, the time constant. The latter is analogous to the inflow rate of water in the characteristic section and plays the same part in formula (9) as $\tau$ in formula (4). The simulator device was produced in two variants in the institute mentioned: a) for a characteristic section, and b) for 6 of such sections. Fig. 1b shows and describes the main circuit of the first variety. Fig. 2 shows the circuit, and Fig. 3 the second variety. It is pointed out that this device may also be used for calculating other processes, the individual steps of which or the processes as a whole may be expressed by linear differential equations. The collaborators of the Tsentral'nyy institut kompleksnoy avtomatizatsii (Central Institute of Large-scale Automation) V. A. Sukharev, Simple Electronic Simulating Device for the Forecast of Floods

S/050/60/000/008/002/002
B012/B056

Yu. A. Rozental', and N. D. Lanin assisted in developing and adjusting the simulator device. There are 4 figures, 1 table, and 8 references: 6 Soviet and 2 British.

Card 3/3

KALININ, G.P.; LEVIN, A.G.

Use of electron models in forecasting floods resulting from rainfalls. Meteor. i gidrol. no.12:14-18 D '60. (MIRA 13:11)
(Floods) (Electronic analog computers)

KALININ, G. P.

"Prediction of the Runoff Process by Means of an Appropriate Solution of the Basic Equations for Non-Permanent Flow"

Report presented at the International Conference of Hydrological Forecasting. Budapest, Hungary, 11-14 April 61

Cent. Inst. of Prognostication, Moscow.

KALINIIN, G.P., dr., a foldrajzi tudomanyok doktora

Forecasting water levels and water discharges on the ground of an approximate solution of the basic equations of the non-permanent motions of water. Vizugyi kozl no.4:420-436 '61.

1. Moszkvai Elorejelzesi Intezet osztalyvezetoje.

KALININ, G.P.

International conference on hydrological forecasts. Meteor. i gidrol. no.9:65 S '61. (MIRA 14:8)
(Hydrology--Congresses)

KALININ, G.P.

Reasons for the use of runoff distribution curves. Meteor. i. gidrol. no.6:20-27 Je '62. (MIRA 15:6)
(Runoff)

KALININ, G.P.; KUCHMENT, L.S.

Numerical methods of solving Saint-Venant equations for calculating unsteady movement of water in rivers. Meteor. i gidrol. no.6:3-9 Je '63. (MIRA 16:6)

1. TSentral'nyy institut prognozov.
(Hydrodynamics)

KALININ, G.P.

Analysis of the calculation methods of bed reserves and the influx of water in the drainage network. Trudy TSIP no.117:3-18 '63.
(MIRA 16:7)

(Steam measurements)

KALININ, G.P.

Forecasting and calculating methods for floods in natural and regulated rivers. Trudy TSIP no.117:19-28 '63. (MIRA 16:7)
(Flood forecasting)

KALININ, G.P.

Hydrological basis of the form of artificial floods. Trudy TSIP
no.117:29-32 '63. (MIRA 16:7)
(Hydrology)

VELIKANOV, Mikhail Andreyevich [deceased]; KALININ, G.F., otv.
red.; KOZHINA, Z.M., red.

[Land hydrology] Gidrologiia sushi. 5. izd., dop. i perer.
Leningrad, Gidrometeoizdat, 1964. 402 p. (MIRA 17:9)

KALININ, G.P., prof.

Mikhail andreevich Velikanov; obituary. Meteor. i gidrol
no.6:61-62 Je '64 (MIRA 17:8)

KALININ, G.P., doktor geograf. nauk, prof.; LEVIN, A.G., kand. tekhn. nauk

Precalculation of a hydrograph by the water budget method using an electronic computer. Meteor. i gidrol. no.7:3-10 Jl '64 (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet i TSentral'nyy institut prognozov.

KALININ, G.P., doktor geograf, nauk, prof.; KUCHMENT, L.S., kand. fiz,-mat. nauk; KOREN', V.I.

Numerical experiments in hydrology. Meteor. i gidrol. no.11:16-22 N '64. (MIRA 17:12)

1. Moskovskiy godusarstvennyy universitet i TSentral'nyy institut prognozov.

KALININ, G.P.; SHI[illegible]KOV, A.P.

Calculation of water levels and discharges below a hydroelectric power station. Trudy TsIP no.133:3-22 '64.

(MIRA 17:10)

BEFANI, Nenila Feofanovna; KALININ, Gennadiy Pavlovich; KOMAROV, V.D., otv. red.; KOZHINA, Z.M., red.

[Exercises and methodological developments on hydrologic forecasts] Uprazhneniia i metodicheskie razrabotki po digrologicheskim prognozam. Leningrad, Gidrometeoizdat, 1965. 438 p. (MIRA 18:5)

KALININ, G.P.; LEVIN, A.G.

Calculation of atmospheric precipitation. Trudy GGO no.175:67-75
'65. (MIRA 18:8)

1. TSentral'nyy institut prognozov.

L 22994-66 EWT(m)/EWP(t) IJP(c) JD/JG

ACC NR: AP6012142 SOURCE CODE: UR/0413/66/000/007/0060/0060

INVENTOR: Kalinin, G. P.; Yelyutin, O. P. 18

B

ORG: none

TITLE: A method of vanadium production. Class 40, No. 180347

27

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 60

TOPIC TAGS: vanadium, vanadium extraction, aluminothermic extraction

18

ABSTRACT: This Author Certificate introduced an aluminothermic method of vanadium extraction from vanadium pentoxide. In order to improve the ductility of vanadium and reduce production costs, boron oxide in the amount of 0.1—2.0% of the weight of vanadium pentoxide is added to the initial charge. [WW]

SUB CODE: 11/ SUBM DATE: 11Nov64/ ATD PRESS: 4237

Card 1/1 pla UDC: 669.292.33

ACC NR: AP6013365 SOURCE CODE: UR/0370/66/000/002/0125/0130

45

AUTHOR: Kalinin, G. P. (Moscow); Yelyutin, O. P. (Moscow); Mamontovskaya, L. V. (Moscow)

44

B

ORG: none

21 21 27

TITLE: Physical and mechanical properties of alloys of the Ti-Nb-Mo system

SOURCE: AN SSSR. Izvestiya. Metally, no. 2, 1966, 125-130

TOPIC TAGS: titanium alloy, niobium alloy, molybdenum alloy, solid mechanical property, solid physical property

ABSTRACT: The concentration dependences of some physical and mechanical properties of alloys in the titanium corner of the Ti-Nb-Mo system were studied on alloys containing up to 50% Nb and 40% Mo. The electrical resistance, its temperature coefficient, thermal conductivity, thermal emf, modulus of normal elasticity, strength, hardness, and plasticity were determined by plotting the corresponding composition vs. property diagrams. Two regions of alloys are distinguished: one with low strength properties and a low plasticity, and one with a high strength and a satisfactory plasticity. The first group of alloys with a strength of 950-1000 Mn/m$^2$ (97-102 kg/mm$^2$) and a plasticity of 9-14% includes Ti-Nb alloys with 30-35% Nb, Ti-Mo alloys with 10-13% Mo, and intermediate ternary alloys Ti-Nb-Mo. The alloys are located at the boundary of the region of the martensitic transformation. The group

Card 1/2 UDC: 669.017.13

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ACC NR: AP6013365 /

of alloys with a satisfactory plasticity includes binary Ti-Nb alloys with 45-55% Nb, binary Ti-Mo alloys with 20-25% Mo, and intermediate ternary alloys Ti-Nb-Mo, located at the boundary of $(\alpha+\beta)\beta$-phase regions. 16 These alloys have an ultimate strength of 500-900 $Mn/m^2$ (51-92 $kg/mm^2$) and an elongation of 15-17%. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 05Nov64/ ORIG REF: 002/ OTH REF: 001

Card 2/2 //LP

AUTHOR: Kalinin, G. P.; Yelyutin, V. P.; Mamontovskaya, L. V.

TITLE: Physical and mechanical properties of alloys of the Ti-Nb-Al system

4 21 27 4

SOURCE: AN SSSR. Izvestiya. Metally, no. 5, 1965, 146-150

TOPIC TAGS: titanium base alloy, niobium containing alloy, aluminum containing alloy, thermoelectromotive force, electrical resistivity, heat conduction, ultimate strength, plasticity, phase diagram

[illegible] considerable attention is paid [illegible]

L [illegible]332-65

ACCESSION NR AP50[illegible]

[illegible] heat conduction, electrical properties, thermo-e.m.f., and [illegible] were investigated. 10-g ingots of these al- [illegible] furnace with a zone melting [illegible] loys were obtained [illegible] atmosphere. The ingots were [illegible] of 3 mm and annealed in a vacuum [illegible] after [illegible] presence of [illegible]

L 63332-65

ACCESSION NR: AP5017474

alloys and a decline in their plasticity and technological properties. The most felicitous combination of high values of the investigated physical properties with satisfactory plasticity is displayed by alloys containing 55—60% Nb and up to [illegible] which corresponds to the area of the (α + β) boundary of the [illegible] [illegible] Orig. art. has: 5 figures.

ASSOCIATION: [illegible]

SUBMITTED: [illegible] ENCL: [illegible] SUB CODE: MM, SS

NO REF SOV: [illegible] OTHER: 002

Card [illegible]

L 63132-65

ACCESSION NR: AP5017474

ENCLOSURE: 01

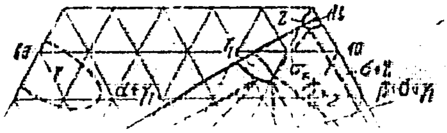

Fig. 1. Isothermal section of

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KALININ, G.S., dots.; GONCHAROV, A.F., dots., otv. red.; BLINOVA, N.V., red.

[The Soviet state and law in the law in the period of the consolidation of Soviet rule, October 1917-July 1918] Sovetskoe gosudarstvo i pravo v period uprochenila Sovetskoi vlasti, oktiabr' 1917 - iiul' 1916 gg.; lektsii dlia studentov VIUZI. Moskva, Vses. iurid. zaochnyi in-t. No.1. 1960. 88 p. (MIRA 15:1)

(Russia--Politics and government)
(Russia--Revolution, 1917-1921)

37555
S/096/62/000/005/002/009
E194/E454

AG0129

AUTHOR: Kalinin, G.Ye., Engineer

TITLE: Application of the principle of similarity to experimental study of gas turbine operating conditions

PERIODICAL: Teploenergetika, no.5, 1962, 35-38

TEXT: The principle of similarity is rightly becoming increasingly widely applied in turbine studies but in some circumstances it is of limited value, particularly on making comparisons between different working substances. This is because three of the five established criteria of turbine operation, namely the Re and Pr numbers and the adiabatic index $k$ must be the same in the full-scale object and in the model. In practice, it is less important that Re and Pr numbers should be identical but $k$ must be the same. The thermodynamic gas equations and the equations of energy and continuity for gas in a turbine are then considered. Criteria of turbine operation are then formulated which can be adopted in cases when Re and Pr numbers need not be exactly the same. The criteria equations include the term $k/k - 1$ which cannot be excluded, even for approximate

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modelling methods, without serious error. However, the situation can be improved by a procedure termed generalization of the criteria. The recommended form of the criterial expression is then

$$\frac{A.75N_i}{GRT_o} = f\left(\frac{p_2}{p_o}, \frac{u^2}{kRT_o}, \frac{k}{k-1}\right) \qquad (3)$$

where A - the thermal equivalent of mechanical work, $N_i$ - the internal energy of the turbine, G - the gas flow, R - the gas constant, $T_o$ - the absolute gas temperature at inlet, $p_o$ - the inlet pressure, $p_2$ - the discharge pressure and u - the peripheral velocity. To determine whether k/(k - 1) can be excluded from the equation (3) it is necessary (in accordance with the rules of approximate modelling) to study experimentally the suitability of this expression for modelling when k/(k - 1) is not identical for the two substances. The suitability of the following expression

$$\frac{A.75N_i}{GRT_o} = f\left(\frac{p_2}{p_o}, \frac{u^2}{kRT_o}\right) \qquad (4)$$

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E194/E454

Application of the principle ...

for modelling with different working substances has been confirmed in published work by tests in a single stage axial turbine with air ($k = 1.4$), $CO_2$ ($k = 1.27$) and $CCl_4$ ($k = 1.12$). Provided that the criteria $u^2/kRT_o$ and $p_2/p_o$ were equal, the results were the same for different values of $k$. Accordingly, Eq.(4) is recommended for use when modelling turbine operating conditions with different working substances. Then if the turbine characteristics are known for one working substance, its characteristics with others may be calculated. This covers, for example, calculations of the influence of water injection on gas turbine output in developing nuclear gas turbines for transport. There are 3 figures.

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KALININ, Georgiy Yevgen'yevich; SULOYEV, A.V., kand. tekhn. nauk retsenzen ; ASTRATOV, N.A., kand. tekhn. nauk; BOGOMOLOV, V.S., kand. tekhn. nauk, nauchn. red.; VARKOVETSKAYA, A.I., red.

[Model tests of marine turbines and engines] Model'nye ispytaniia sudovykh turbin i mashin. Leningrad, Sudostroenie, 1965. 193 p. (MIRA 18:11)

KALININ, I.

USSR/Electronics - Vibrators

Card 1/1 Pub. 89 - 12/29

Authors : Kalinin, I.

Title : Vibrators-Converters

Periodical : Radio 9, 31-33, Sep 1954

Abstract : Several vibrators for converting a direct voltage into an alternating voltage, which is then stepped up by a power transformer, are described. The details of the vibrating armature, that reverses the flow of current, the operation of the transformer and the circuit diagram of a vibrator used for doubling the voltage are featured. Diagrams.

Institution : ...

Submitted : ...

KALININ, I., inzh.

Interaction of freon 22 and oils in refrigerating machines (from "Kältetechnik, No.3, 1957). Khol.tekh. 35 no.5:71-73 S-O '58. (MIRA 11:11)

(Mineral oils) (Freons)

VOLOKITIN, A., prepodavatel'; KALININ, I., prepodavatel'; TSELYKOVSKIY, P., prepodavatel'

A new textbook ("Economics and planning of public food service" by F.IA. Uspenskii and others. Reviewed by A. Volokitin, I.Kalinin, P. TSelykovskii). Sov.torg 34 no.3:47-48 Mr '61. (MIRA 14:2)

1. Leningradskiy institut sovetskoy torgovli im. Engel'sa.
(Restaurants, lunchrooms, etc.—Textbooks)
(Uspenskiy, F.IA.) (Kvitnitskaia, R.N.) (Volkov, K.D.)

KHRISHCHENOVICH, kh.; RADAVICHYUS, E. [Radavicius, E.]; KALININ, I.;
RYCHKOV, A.; MYANDMAA, E. [Mändmaa, E.]; IL'IN, V.

Increase the scope of efficiency work in financial organs. Fin. SSSR 37 no.1:62-68 Ja '63. (MIRA 16:2)

1. Predsedatel' komissii po ratsionalizatorskim predlozheniyam Ministerstva finansov Belorusskoy SSSR (for Khrishchenovich). 2. Predsedatel' komissii po ratsionalizatorskim predlozheniyam Ministerstva finansov Litovskoy SSR (for Radavichyus). 3. Predsedatel' komissii po ratsionalizatorksim predlozheniyam Leningradskogo oblastnogo finznsovogo otdela (for Kalinin). 4. Predsedatel' komissii po ratsionalizatorskim predlozheniyam Tomskogo oblastnogo finansovogo otdela (for Rychkov). 5. Predsedatel' komissii po ratsionalizatorskim predlozheniyam Ministerstva finansov Estonskoy SSR (for Myandmaa). 6. Predsedatel' komissii po ratsionalizatoskim predlozheniyam pri Ministerstve finansov Chuvashskoy ASSR (for Il'in). (Finance) (Suggestion systems)

AKUMUSKIN, I., candidat in stiinte biologice; KALININ, I., ing.

Patents of nature. St si Teh Buc 14 no.9:26-27 S '62.

KALININ, I.A.

Specialized supply agencies of materials and technical equipment. Biul.tekh.-ekon.inform. no.7:70-71 '60. (MIRA 13:7)

(Industrial supply houses)